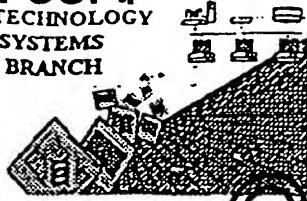


O P E
SEP 20 2004

BEST AVAILABLE COPY

BIOTECHNOLOGY
SYSTEMS
BRANCH

RAW SEQUENCE LISTING
ERROR REPORT



The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/823,964

Source: TFWD

Date Processed by STIC: 4/21/09

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT

MARK SPENCER, TELEPHONE: 703-308-4212; FAX: 703-308-4221

Effective 12/13/03: TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORRED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSIÓN 4.1 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker/chkr41note.htm>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebc/cfs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry directly to (EFFECTIVE 12/03/03): U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office, Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 10/08/03

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Raw Sequence Listing Error Summary

ERROR DETECTED

SUGGESTED CORRECTION

SERIAL NUMBER:

10/823,964

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- 1 Wrapped Nucleic
 Wrapped Aminos The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."
- 2 Invalid Line Length The rules require that a line not exceed 72 characters in length. This includes white spaces.
- 3 Misaligned Amino
 Numbering The numbering under each 5th amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.
- 4 Non-ASCII The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.
- 5 Variable Length Sequence(s) _____ contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.
- 6 PatentIn 2.0
 "bug" A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) _____. Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.
- 7 Skipped Sequences
 (OLD RULES) Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence.
(2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
(i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)
(ii) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
This sequence is intentionally skipped

Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences
- 8 Skipped Sequences
 (NEW RULES) Sequence(s) _____ missing. If intentional, please insert the following lines for each skipped sequence
<210> sequence id number
<400> sequence id number
000
- 9 Use of n's or Xaa's
 (NEW RULES) Use of n's and/or Xaa's have been detected in the Sequence Listing.
Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.
In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.
- 10 Invalid <213>
 Response Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence
- 11 Use of <220>
 Use of <220> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or
 "Unknown." Please explain source of genetic material in <220> to <223> section.
(See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)
- 12 PatentIn 2.0
 "bug" Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.
- 13 Misuse of n/Xaa "n" can only represent a single nucleotide; "Xaa" can only represent a single amino acid



IF

RAW SEQUENCE LISTING
 PATENT APPLICATION: US/10/823,964

DATE: 04/21/2004
 TIME: 07:41:49

Input Set : A:\Seqlist.txt
 Output Set: N:\CRF4\04212004\J823964.raw

```

4 <110> APPLICANT: BAM, NARENDRA
5 BONGERS, JACOB
6 KIRKPATRICK, ROBERT B.
7 JANSON, CHERYL A.
8 JOHANSON, KYUNG
9 QIU, XIANYANG
10 YEH, PING
12 <120> TITLE OF INVENTION: CONJUGATES COMPRISING HUMAN IL-18 AND
13 SUBSTITUTION MUTANTS THEREOF
16 <130> FILE REFERENCE: PU60053
18 <140> CURRENT APPLICATION NUMBER: US/10/823,964
19 <141> CURRENT FILING DATE: 2004-04-14
21 <150> PRIOR APPLICATION NUMBER: 60/462,947
22 <151> PRIOR FILING DATE: 2003-04-15
24 <160> NUMBER OF SEQ ID NOS: 28
26 <170> SOFTWARE: FastSEQ for Windows Version 4.0
28 <210> SEQ ID NO: 1
29 <211> LENGTH: 157
30 <212> TYPE: PRT
31 <213> ORGANISM: Homo sapiens
33 <400> SEQUENCE: 1
34 Tyr Phe Gly Lys Leu Glu Ser Lys Leu Ser Val Ile Arg Asn Leu Asn
35 1 5 10 15
36 Asp Gln Val Leu Phe Ile Asp Gln Gly Asn Arg Pro Leu Phe Glu Asp
37 20 25 30
38 Met Thr Asp Ser Asp Cys Arg Asp Asn Ala Pro Arg Thr Ile Phe Ile
39 35 40 45
40 Ile Ser Met Tyr Lys Asp Ser Gln Pro Arg Gly Met Ala Val Thr Ile
41 50 55 60
42 Ser Val Lys Cys Glu Lys Ile Ser Thr Leu Ser Cys Glu Asn Lys Ile
43 65 70 75 80
44 Ile Ser Phe Lys Glu Met Asn Pro Pro Asp Asn Ile Lys Asp Thr Lys
45 85 90 95
46 Ser Asp Ile Ile Phe Phe Gln Arg Ser Val Pro Gly His Asp Asn Lys
47 100 105 110
48 Met Gln Phe Glu Ser Ser Ser Tyr Glu Gly Tyr Phe Leu Ala Cys Glu
49 115 120 125
50 Lys Glu Arg Asp Leu Phe Lys Leu Ile Leu Lys Lys Glu Asp Glu Leu
51 130 135 140
52 Gly Asp Arg Ser Ile Met Phe Thr Val Gln Asn Glu Asp
53 145 150 155
56 <210> SEQ ID NO: 2
57 <211> LENGTH: 157

```

Dose Not Comply
Corrected Diskette Needed
(pg. 3-6)

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/823,964

DATE: 04/21/2004
TIME: 07:41:49

Input Set : A:\Seqlist.txt
Output Set: N:\CRF4\04212004\J823964.raw

58 <212> TYPE: PRT
 59 <213> ORGANISM: Mus musculus
 61 <400> SEQUENCE: 2
 62 Asn Phe Gly Arg Leu His Cys Thr Thr Ala Val Ile Arg Asn Ile Asn
 63 1 5 10 15
 64 Asp Gln Val Leu Phe Val Asp Lys Arg Gln Pro Val Phe Glu Asp Met
 65 20 25 30
 66 Thr Asp Ile Asp Gln Ser Ala Ser Glu Pro Gln Thr Arg Leu Ile Ile
 67 35 40 45
 68 Tyr Met Tyr Lys Asp Ser Glu Val Arg Gly Leu Ala Val Thr Leu Ser
 69 50 55 60
 70 Val Lys Asp Ser Lys Met Ser Thr Leu Ser Cys Lys Asn Lys Ile Ile
 71 65 70 75 80
 72 Ser Phe Glu Glu Met Asp Pro Pro Glu Asn Ile Asp Asp Ile Gln Ser
 73 85 90 95
 74 Asp Leu Ile Phe Phe Gln Lys Arg Val Pro Gly His Asn Lys Met Glu
 75 100 105 110
 76 Phe Glu Ser Ser Leu Tyr Glu Gly His Phe Leu Ala Cys Gln Lys Glu
 77 115 120 125
 78 Asp Asp Ala Phe Lys Leu Ile Leu Lys Lys Asp Glu Asn Gly Asp
 79 130 135 140
 80 Lys Ser Val Met Phe Thr Leu Thr Asn Leu His Gln Ser
 81 145 150 155
 84 <210> SEQ ID NO: 3
 85 <211> LENGTH: 203
 86 <212> TYPE: PRT
 87 <213> ORGANISM: Homo sapiens
 89 <400> SEQUENCE: 3
 90 Met His His His His His Thr Arg Gly Met Ala Ala Glu Pro Val
 91 1 5 10 15
 92 Glu Asp Asn Cys Ile Asn Phe Val Ala Met Lys Phe Ile Asp Asn Thr
 93 20 25 30
 94 Leu Tyr Phe Ile Ala Glu Asp Asp Glu Asn Leu Glu Ser Asp Tyr Phe
 95 35 40 45
 96 Gly Lys Leu Glu Ser Lys Leu Ser Val Ile Arg Asn Leu Asn Asp Gln
 97 50 55 60
 98 Val Leu Phe Ile Asp Gln Gly Asn Arg Pro Leu Phe Glu Asp Met Thr
 99 65 70 75 80
 100 Asp Ser Asp Cys Arg Asp Asn Ala Pro Arg Thr Ile Phe Ile Ile Ser
 101 85 90 95
 102 Met Tyr Lys Asp Ser Gln Pro Arg Gly Met Ala Val Thr Ile Ser Val
 103 100 105 110
 104 Lys Cys Glu Lys Ile Ser Thr Leu Ser Cys Glu Asn Lys Ile Ile Ser
 105 115 120 125
 106 Phe Lys Glu Met Asn Pro Pro Asp Asn Ile Lys Asp Thr Lys Ser Asp
 107 130 135 140
 108 Ile Ile Phe Phe Gln Arg Ser Val Pro Gly His Asp Asn Lys Met Gln
 109 145 150 155 160
 110 Phe Glu Ser Ser Ser Tyr Glu Gly Tyr Phe Leu Ala Cys Glu Lys Glu

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/823,964

DATE: 04/21/2004
TIME: 07:41:49

Input Set : A:\Seqlist.txt
Output Set: N:\CRF4\04212004\J823964.raw

111 165 170 175
112 Arg Asp Leu Phe Lys Leu Ile Leu Lys Lys Glu Asp Glu Leu Gly Asp
113 180 185 190
114 Arg Ser Ile Met Phe Thr Val Gln Asn Glu Asp
115 195 200

118 <210> SEQ ID NO: 4

119 <211> LENGTH: 157

120 <212> TYPE: PRT

121 <213> ORGANISM: Artificial Sequence

123 <220> FEATURE:

124 <223> OTHER INFORMATION: Whereby the Cysteine at position 38 of the human
125 IL-18 sequence has been replaced with Serine.

127 <400> SEQUENCE: 4

128 Tyr Phe Gly Lys Leu Glu Ser Lys Leu Ser Val Ile Arg Asn Leu Asn
129 1 5 10 15

130 Asp Gln Val Leu Phe Ile Asp Gln Gly Asn Arg Pro Leu Phe Glu Asp
131 20 25 30

132 Met Thr Asp Ser Asp Ser Arg Asp Asn Ala Pro Arg Thr Ile Phe Ile
133 35 40 45

134 Ile Ser Met Tyr Lys Asp Ser Gln Pro Arg Gly Met Ala Val Thr Ile
135 50 55 60

136 Ser Val Lys Cys Glu Lys Ile Ser Thr Leu Ser Cys Glu Asn Lys Ile
137 65 70 75 80

138 Ile Ser Phe Lys Glu Met Asn Pro Pro Asp Asn Ile Lys Asp Thr Lys
139 85 90 95

140 Ser Asp Ile Ile Phe Phe Gln Arg Ser Val Pro Gly His Asp Asn Lys
141 100 105 110

142 Met Gln Phe Glu Ser Ser Ser Tyr Glu Gly Tyr Phe Leu Ala Cys Glu
143 115 120 125

144 Lys Glu Arg Asp Leu Phe Lys Leu Ile Leu Lys Lys Glu Asp Glu Leu
145 130 135 140

146 Gly Asp Arg Ser Ile Met Phe Thr Val Gln Asn Glu Asp
147 145 150 155

150 <210> SEQ ID NO: 5

151 <211> LENGTH: 157

152 <212> TYPE: PRT

153 <213> ORGANISM: Artificial Sequence

155 <220> FEATURE:

156 <223> OTHER INFORMATION: Whereby the Cysteine at position 38 of the human

157 IL-18 sequence has been replaced with Serine, the

158 Cysteine at position 68 has been replaced with

159 Aspartic acid, and the Asparagine at position 78.

160 <220> has been replaced with Cysteine.

162 <400> SEQUENCE: 5

163 Tyr Phe Gly Lys Leu Glu Ser Lys Leu Ser Val Ile Arg Asn Leu Asn
164 1 5 10 15

165 Asp Gln Val Leu Phe Ile Asp Gln Gly Asn Arg Pro Leu Phe Glu Asp
166 20 25 30

167 Met Thr Asp Ser Asp Ser Arg Asp Asn Ala Pro Arg Thr Ile Phe Ile

Please explain item #11 on error summary sheet.

Per new sequence rules, please use a maximum of 4 lines for explanations.

? ASN is at position 78.

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/823,964

DATE: 04/21/2004
TIME: 07:41:49

Input Set : A:\Seqlist.txt
Output Set: N:\CRF4\04212004\J823964.raw

168 35 40 45
169 Ile Ser Met Tyr Lys Asp Ser Gln Pro Arg Gly Met Ala Val Thr Ile
170 50 55 60
171 Ser Val Lys Asp Glu Lys Ile Ser Thr Leu Ser Cys Glu Asn Lys Ile
172 65 70 75 80
173 Ile Ser Phe Lys Glu Met Asn Pro Pro Asp Asn Ile Lys Asp Thr Lys
174 85 90 95
175 Ser Asp Ile Ile Phe Phe Gln Arg Ser Val Pro Gly His Asp Asn Lys
176 100 105 110
177 Met Gln Phe Glu Ser Ser Ser Tyr Glu Gly Tyr Phe Leu Ala Cys Glu
178 115 120 125
179 Lys Glu Arg Asp Leu Phe Lys Leu Ile Leu Lys Lys Glu Asp Glu Leu
180 130 135 140
181 Gly Asp Arg Ser Ile Met Phe Thr Val Gln Asn Glu Asp
182 145 150 155

185 <210> SEQ ID NO: 6

186 <211> LENGTH: 157

187 <212> TYPE: PRT

188 <213> ORGANISM: Artificial Sequence

189 <220> FEATURE:

191 <223> OTHER INFORMATION: Whereby the Cysteine at position 38 of the human
192 IL-18 sequence has been replaced with Serine, the
193 Cysteine at position 68 has been replaced with
194 Aspartic acid, and the Glutamic acid at position
195 121 has been replaced with Cysteine.

197 <400> SEQUENCE: 6

198 Tyr Phe Gly Lys Leu Glu Ser Lys Leu Ser Val Ile Arg Asn Leu Asn
199 1 5 10 15
200 Asp Gln Val Leu Phe Ile Asp Gln Gly Asn Arg Pro Leu Phe Glu Asp
201 20 25 30
202 Met Thr Asp Ser Asp Ser Arg Asp Asn Ala Pro Arg Thr Ile Phe Ile
203 35 40 45
204 Ile Ser Met Tyr Lys Asp Ser Gln Pro Arg Gly Met Ala Val Thr Ile
205 50 55 60
206 Ser Val Lys Asp Glu Lys Ile Ser Thr Leu Ser Cys Glu Asn Lys Ile
207 65 70 75 80
208 Ile Ser Phe Lys Glu Met Asn Pro Pro Asp Asn Ile Lys Asp Thr Lys
209 85 90 95
210 Ser Asp Ile Ile Phe Phe Gln Arg Ser Val Pro Gly His Asp Asn Lys
211 100 105 110
212 Met Gln Phe Glu Ser Ser Ser Tyr Cys Gly Tyr Phe Leu Ala Cys Glu
213 115 120 125
214 Lys Glu Arg Asp Leu Phe Lys Leu Ile Leu Lys Lys Glu Asp Glu Leu
215 130 135 140
216 Gly Asp Arg Ser Ile Met Phe Thr Val Gln Asn Glu Asp
217 145 150 155

220 <210> SEQ ID NO: 7

221 <211> LENGTH: 157

222 <212> TYPE: PRT

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/823,964

DATE: 04/21/2004
TIME: 07:41:49

Input Set : A:\Seqlist.txt
Output Set: N:\CRF4\04212004\J823964.raw

?23 <213> ORGANISM: Artificial Sequence
?25 <220> FEATURE:
?26 <223> OTHER INFORMATION: Whereby the Cysteine at position 38 of the human
?27 IL-18 sequence has been replaced with Serine, the
?28 Cysteine at position 68 has been replaced with Aspartic acid, and the Leucine at position 144 has
?29 <220> been replaced with Cysteine. *Same error*
?30 <223>

?32 <400> SEQUENCE: 7

?33 Tyr Phe Gly Lys Leu Glu Ser Lys Leu Ser Val Ile Arg Asn Leu Asn
?34 1 5 10 15
?35 Asp Gln Val Leu Phe Ile Asp Gln Gly Asn Arg Pro Leu Phe Glu Asp
?36 20 25 30
?37 Met Thr Asp Ser Asp Ser Arg Asp Asn Ala Pro Arg Thr Ile Phe Ile
?38 35 40 45
?39 Ile Ser Met Tyr Lys Asp Ser Gln Pro Arg Gly Met Ala Val Thr Ile
?40 50 55 60
?41 Ser Val Lys Asp Glu Lys Ile Ser Thr Leu Ser Cys Glu Asn Lys Ile
?42 65 70 75 80
?43 Ile Ser Phe Lys Glu Met Asn Pro Pro Asp Asn Ile Lys Asp Thr Lys
?44 85 90 95
?45 Ser Asp Ile Ile Phe Phe Gln Arg Ser Val Pro Gly His Asp Asn Lys
?46 100 105 110
?47 Met Gln Phe Glu Ser Ser Ser Tyr Glu Gly Tyr Phe Leu Ala Cys Glu
?48 115 120 125
?49 Lys Glu Arg Asp Leu Phe Lys Leu Ile Leu Lys Lys Glu Asp Glu Cys
?50 130 135 140
?51 Gly Asp Arg Ser Ile Met Phe Thr Val Gln Asn Glu Asp
?52 145 150 155

?55 <210> SEQ ID NO: 8

?56 <211> LENGTH: 157

?57 <212> TYPE: PRT

?58 <213> ORGANISM: Artificial Sequence

?60 <220> FEATURE:

?61 <223> OTHER INFORMATION: Whereby the Cysteine at position 38 of the human
?62 IL-18 sequence has been replaced with Serine, the
?63 Cysteine at position 68 has been replaced with Aspartic acid, Aspartic acid at position 157 has
?64 <220> been replaced with Cysteine. *SAME error*

?67 <400> SEQUENCE: 8

?68 Tyr Phe Gly Lys Leu Glu Ser Lys Leu Ser Val Ile Arg Asn Leu Asn
?69 1 5 10 15
?70 Asp Gln Val Leu Phe Ile Asp Gln Gly Asn Arg Pro Leu Phe Glu Asp
?71 20 25 30
?72 Met Thr Asp Ser Asp Ser Arg Asp Asn Ala Pro Arg Thr Ile Phe Ile
?73 35 40 45
?74 Ile Ser Met Tyr Lys Asp Ser Gln Pro Arg Gly Met Ala Val Thr Ile
?75 50 55 60
?76 Ser Val Lys Asp Glu Lys Ile Ser Thr Leu Ser Cys Glu Asn Lys Ile
?77 65 70 75 80

The type of errors shown exist throughout
the Sequence Listing. Please check subsequent
sequences for similar errors.

VERIFICATION SUMMARY
PATENT APPLICATION: US/10/823,964

DATE: 04/21/2004
TIME: 07:41:50

Input Set : A:\Seqlist.txt
Output Set: N:\CRF4\04212004\J823964.raw

M:270 C: Current Application Number differs, Replaced Current Application Number
M:259 W: Allowed number of lines exceeded, <223> Other Information: ✓
M:259 W: Allowed number of lines exceeded, <223> Other Information: ✓
M:259 W: Allowed number of lines exceeded, <223> Other Information: ✓
M:259 W: Allowed number of lines exceeded, <223> Other Information: ✓
M:259 W: Allowed number of lines exceeded, <223> Other Information: ✓
M:259 W: Allowed number of lines exceeded, <223> Other Information: ✓